MODEL III

BASIC TAPE INSTRUCTION COURSE

CAT. NO.
26-2015

Radio Shack TRS-80 SOFTWARE

™

* * * IMPORTANT NOTICE * * *

This program is designed for use only with the Model III Computer. It will not work on the Model I Computer. The tapes included in this package are recorded at the High 1500 Baud rate, which will only load on a Model III. (See Loading Instructions.) Do not try to use this program on a Model I.

Introduction

The BASIC Course consists of Model III tapes which contain a beginning course in Model III BASIC. This course does not assume any previous experience with BASIC.

The lessons are designed so that you will be able to write simple programs within a matter of minutes. By using the BASIC Course and your Model III Operation and BASIC Language Reference Manual, you should be able to write programs in BASIC. This BASIC Course is intended as a primary aid in learning BASIC.

The computer offers a unique advantage as an educational tool. Each lesson is self-pacing, interactive, and dynamic. It is not like reading a book; you literally talk back to the computer as you learn. You can progress as fast or as slow as you wish. Graphics, animation, and readability make this approach to learning BASIC fun.

During each lesson, there are quick tests to help you gauge your progress. Unlike written tests, the computer will explain why a particular answer is wrong. At the end of each lesson, and before each test, the program will ask if you wish to repeat the last lesson.

Loading the Lessons

It is assumed you have reviewed the general operational procedures for your equipment as explained in the Model III Operation and BASIC Language Reference Manual and are now aware of how to power on your computer, load tapes, etc.

1. Turn on the system. If you are not familiar with the Model III System, please refer to your Model III Operation and BASIC Language Reference Manual for System Start Up (Power Up Sequence).

2. **The screen will show:**   **You type:**

   Cass?   H and press ENTER .

   Memory Size?   Press ENTER .

   READY>__   CLOAD"INTRO"
                                   and press ENTER .

After the lesson has loaded into the computer, READY>__ will appear again. Type: RUN and press ENTER .

The Introduction has detailed instructions on using the program and loading the lessons.

The Lessons

The BASIC Course consists of eight Lessons and an Introduction. The Introduction explains how to load and use each Lesson. Some Lessons are made up of smaller sub-segments, such as LESSON1, L1P2 (Part 2 of Lesson 1), L1P3 (Part 3 of Lesson 1), L1P4 (Part 4 of Lesson 1), etc.

Each Lesson or sub-segment may be studied or reviewed at any time. To stop a Lesson, or go to a sub-segment, press the ⌈BREAK⌉ key. When READY>＿ appears, type Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " and the name of the desired lesson or segment. After the computer has loaded the lesson or segment, READY>＿ will appear again. Type: Ⓡ Ⓤ Ⓝ and press ⌈ENTER⌉. You must press ⌈ENTER⌉ after responding to questions that appear on the screen.

Lesson 1

Lesson 1 (Beginning BASIC) is essentially your introduction to the world of computers. It explains the way BASIC works, the use of line numbers, and how BASIC programs are structured. Loading instructions and their contents are as follows:

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ Ⓔ Ⓢ Ⓢ Ⓞ Ⓝ ①" ⌈ENTER⌉

Introduction	Line Numbers	INPUT
LIST	Variables	Line Editing
PRINT	NEW	Tape Storage
CLOAD		

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ ① Ⓟ ②" ⌈ENTER⌉

PRINT Spacing	PRINT@	END
Expressions	Hierarchy	LET
PRINT TAB	Strings	

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ ① Ⓟ ③ ⌷ ⌈ENTER⌉

IF/THEN	Operator Meanings	GOTO
READ/DATA	Arrays	DIM
FOR/NEXT	Looping	

C L O A D " L 1 P 4 " ENTER

ABS	INT	RND
GOSUB/RETURN	ON...GOSUB	ON...GOTO
RESTORE		

Graphics Statements:

SET	RESET	POINT

Lesson 2

Lesson 2 shows you how to make changes to programs, using the Editing functions and the Editing commands. Lesson 2 also covers shortcuts in Editing that let you make changes quickly and easily.

C L O A D " L E S S O N 2 " ENTER

Using Edit	LIST	EDIT
SPACE BAR	D elete	I nsert
SHIFT UP ARROW	CURSOR MOTION	S earch
H ack	X (end of line)	K ill
C hange	L ist edited line	A (cancel)
Q (quit and exit)	E (save and exit)	

Lesson 3

Lesson 3 covers the different types of variables and variable names allowed in BASIC. The lesson explains in detail how to use the most efficient type of variable for any application. Lesson 3 also examines the use of arrays to hold large quantities of related information.

C L O A D " L E S S O N 3 " ENTER

Integer	Single Precision	Exponential Form
Double Precision	Strings	Type Declaration
Arrays	DIM	

Lesson 4

Lesson 4 details the use of BASIC Operators and Commands. The operators (arithmetic and logical) and their use are explained in full. The BASIC Commands are listed and explained.

CLOAD "LESSON4" [ENTER]

Operators

Arithmetic Operators:

Addition	Subtraction	Multiplication
Division	Exponentiation	Grouping

Relational Operators:

Less Than	Greater Than	Equal to
Less Than or Equal	Greater Than or Equal	Not Equal to

Logical Operators:

True Expression	False Expression	AND
OR	NOT	

String Operators:

+ (Plus)	Less Than	Greater Than
Equal to	Less Than or Equal	Not Equal to
Greater Than or Equal		

Operator Hierarchy

Commands

AUTO	CLEAR	CSAVE
CLOAD?	CLOAD	STOP
CONT	SYSTEM	TRON/TROFF

Lesson 5

Lesson 5 explains how to enter and store data, and retrieve it. Saving data on tape for later use is covered in detail.

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ Ⓔ Ⓢ Ⓢ Ⓞ Ⓝ ⑤ "   [ENTER]

INPUT	Input/Output (I/O) Statements	
INP	INPUT#	INKEY$
PRINT@	READ	PRINT
LPRINT USING	PRINT USING	LPRINT
# Field Specifier	PRINT#	OUT
! and % Field Specifiers		

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ ⑤ Ⓟ ② "   [ENTER]

Input/Output (Cont.)	LPRINT	LPRINT USING
LLIST	Cassette Data Files	PRINT#
INPUT#	INP	OUT
INKEY$		

Lesson 6

Lesson 6 explains how to manipulate text strings and use them for comparisons and logical operations.

Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ " Ⓛ Ⓔ Ⓢ Ⓢ Ⓞ Ⓝ ⑥ "   [ENTER]

String Functions:

ASC	CHR$	FRE
LEN	LEFT$	MID$
RIGHT$	STR$	STRING$
VAL		

String Operations:

ASCII Codes	ASCII Function	CHR$ Function
Relational Operators	LEFT$ Function	MID$ Function
RIGHT$ Function	LEN Function	VAL Function
STR$ Function	FRE Function	

Lesson 7

Lesson 7 details the special features of Model III BASIC and how to use these features.

`C L O A D " L E S S O N 7 "` [ENTER]

? (PRINT)	' (REM)	Compact Lines
NEXT	Ending Quotes	IF...THEN...ELSE
ON ERROR GOTO	RESUME	ERROR Statement
ERR Function	ERL Function	

`C L O A D " L 7 P 2 "` [ENTER]

Special Character Set   Special Options

Lesson 8

Finally, Lesson 8 completes the course with a section on machine language subprograms that are called from a BASIC program.

`C L O A D " L E S S O N 8 "` [ENTER]

Machine Language	SYSTEM Command	PEEK
POKE	USR Function	VARPTR Function